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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/820,980

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EXAMINER

CHEN, SHIN HON

ART UNIT

PAPER NUMBER

2131

MAIL DATE

DELIVERY MODE

09/26/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/820,980

Applicant(s)

KHARE ET AL.

Examiner

Shin-Hon Chen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-28 have been examined.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Talpade et al. U.S. Pub. No. 20040148520 (hereinafter Talpade) in view of Fan et al. U.S. Pat. No. 6219706 (hereinafter Fan).

4. As per claim 1, Talpade discloses a method of preventing an attack on a network, the method comprising the computer-implemented steps of: receiving an ICMP packet that includes a copy of a header associated with a connection in a connection-oriented transport protocol (Talpade: [0020]: analyze packet header for packet filtering for ICMP). Talpade does not explicitly disclose obtaining a packet sequence value from the header; determining if the packet sequence value is valid; updating a parameter value associated with the transport protocol connection only if the packet sequence value is determined to be valid. However, Fan discloses filtering packets based on the sequence number presented in the header portion of a packet (Fan: column 10 lines 27-51). It would have been obvious to one having ordinary skill in the art to utilize the sequence number contained in the connection-oriented packet into the sequence

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number field of the ICMP packet because the sequence field is contained in both ICMP and TCP packets. Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to combine the teachings of Fan within the system of Talpade because it allows packet filter to analyze invalid range of value presented in header for filtering purposes.

5. As per claim 2, Talpade as modified discloses the method of claim 1. Talpade as modified further discloses wherein the step of receiving an ICMP packet comprises receiving an ICMP packet that includes a copy of a TCP header associated with a TCP connection (Fan: column 10 lines 27-51). Same rationale applies here as above in rejecting claim 1.

6. As per claim 3, Talpade as modified discloses the method of claim 1. Talpade as modified further discloses wherein the step of receiving an ICMP packet comprises receiving an ICMP "endpoint unreachable" error packet (Talpade: [0006]: denial of service attack).

7. As per claim 4, Talpade as modified discloses the method of claim 1. Talpade as modified further discloses wherein the step of receiving an ICMP packet comprises receiving an ICMP packet that specifies that fragmentation is needed (Talpade: [0020]: ICMP messages).

8. As per claim 5, Talpade as modified discloses the method of claim 1. Talpade as modified further discloses wherein the step of determining if the packet sequence value is valid comprises determining if the packet sequence value is within a range of packet sequence values that are allowed by the transport protocol for the connection (Fan: column 10 lines 27-51).

9. As per claim 6, Talpade as modified discloses the method of claim 1. Talpade as modified further discloses wherein the step of determining if the packet sequence value is valid comprises determining if the packet sequence value is within a range of sent but unacknowledged TCP packet sequence values for the connection (Fan: column 10 lines 27-51).

10. As per claim 7, Talpade as modified discloses the method of claim 1. Talpade as modified further discloses wherein the step of determining if the packet sequence value is valid comprises determining if the packet sequence value is exactly equal to one or more sequence values of one or more packets that are then-currently stored in a TCP re-transmission buffer, starting at a sequence value of a previously sent segment that resulted in receiving the ICMP packet (Fan: column 10 lines 35-41).

11. As per claim 8, Talpade as modified discloses the method of claim 1. Talpade as modified further discloses wherein the steps are performed in a router acting as a TCP endpoint node (Talpade: [0020]: sensor/firewall).

12. As per claim 9, Talpade as modified discloses the method of claim 1. Talpade as modified further discloses wherein the steps are performed in a firewall device (Talpade: [0020]; Fan: column 10 lines 27-51: firewall/packet filter).

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13. As per claim 10-28, claims 10-28 encompass the same scope as claims 1-9. Therefore, claims 10-28 are rejected based on the same reason set forth above in rejecting claims 1-9.

Response to Arguments

14. Applicant's arguments filed on 7/29/07 have been fully considered but they are not persuasive.

Regarding applicant's remarks, applicant argues that the Fan reference cannot be used to reject claims 1-28 because the prior art and the claimed invention were common owned by the same person under U.S.C. 103(c)(1). The examiner agrees that the U.S.C. 103(c)(1) states that the prior art should not preclude patentability where the subject matter and the claimed invention were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the same person *if it qualifies as prior art only under one or more subsections (e), (f), and (g) of section 102*. However, the Fan reference qualifies as prior art under U.S.C. 102 (b). Therefore, the Fan reference stands to be valid in rejecting claims 1-28 and applicant's argument is traversed. ***MPEP 706.02 (L)(2)***.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Goldberg et al. U.S. Pub. No. 20040013112 discloses dynamic packet filtering utilizing session tracking.

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shin-Hon Chen whose telephone number is (571) 272-3789. The examiner can normally be reached on Monday through Friday 8:30am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Shin-Hon Chen
Examiner
Art Unit 2131

SC

CHRISTOPHER REVAK
PRIMARY EXAMINER

